

Project Fact Sheet

CEC / SMUD Regen Project 3.8 Solar Dish Concentrating with Stirling Engine

GOALS

- Integrate the proven SAIC solar concentrating dish with the 25 kW STM Beta Stirling engine, achieve 22% solar conversion efficiency with 90% availability.
- Fabricate fixed focal length mirror facets for a solar dish/PV system and design the integration of the SAIC solar concentrating dish with a 20 kW PV receiver.
- Install the solar dish/Stirling system as a demonstration in Sacramento.
- Based upon other SAIC dish/PV programs and the results from this design work, a dish/PV system may be installed in Sacramento if it is agreed that it has substantial economic and reliability advantages over the dish / Stirling system.

PROJECT DESCRIPTION



SAIC is proposing to develop a 20-25 kW solar dish/Stirling system and design a solar dish/photovoltaic system and install a demonstration system of the solar dish/Stirling system in SMUD's service territory. An option to install the solar dish/photovoltaic system may be selected only if very favorable results occur in the development of the SAIC dish/PV program and there are problems with the dish Stirling system. This demonstration will prove the performance and reliability so that MW scale solar farms can be built in California and exported to the other Southwestern States and internationally.



BENEFITS TO CALIFORNIA

The results of this project will be a solar dish/Stirling system that operates reliably, meets the performance goals and objectives discussed above, is ready to be commercially deployed in MW scale solar farms in California and the desert Southwest, and can be mass produced to reduce cost to be competitive for the California grid market when considering the environmental and renewable nature of the technology.

FUNDING AMOUNT

Commission	\$1,301,000
Match	\$190,000
Total	\$1,491,000

PROJECT STATUS

Project is currently underway with a critical decision making point in the summer of 2003.

FOR MORE INFORMATION

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